

MBI-0032.ST25.txt
SEQUENCE LISTING

<110> Broun, Pierre

<120> Method for Modifying a Biosynthetic Pathway

<130> MBI-0032

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<170> PatentIn version 3.0

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<222> (6) .. (1091)

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cc ^g gc ^g atg acg ac ^g gc ^g atg ggg atg aat cc ^g tct cc ^g ac ^g aaa gg ^c Pro Ala Met Thr Thr Ala Met Gly Met Asn Pro Ser Pro Thr Lys Gly 225 230 235	722
gtt ttg att aac ttg gaa gat aga aca ggg aaa gtg tgg cc ^g ttc cgt Val Leu Ile Asn Leu Glu Asp Arg Thr Gly Lys Val Trp Arg Phe Arg 240 245 250 255	770
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agc cc ^g ttc gtt aaa gag aag aat ctt cga gcc ggt gat gtg gtt tgt Ser Arg Phe Val Lys Glu Lys Asn Leu Arg Ala Gly Asp Val Val Cys 275 280 285	866
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gtt ggc aag aag aga tct cc ^g gaa gat gat ttg ttt tcg tta ggg tgt Val Gly Lys Lys Arg Ser Arg Glu Asp Asp Leu Phe Ser Leu Gly Cys 340 345 350	1058
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Gly Ser Ser Val Val Leu Asp Ser Glu Asn Gly Val Glu Thr Glu Ser
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Arg Lys Leu Pro Ser Ser Lys Tyr Lys Gly Val Val Pro Gln Pro Asn
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85 90 95

Gly Thr Phe Asn Glu Glu Glu Ala Ala Ser Ser Tyr Asp Ile Ala
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Val Arg Arg Phe Arg Gly Arg Asp Ala Val Thr Asn Phe Lys Ser Gln
115 120 125

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Ala Glu Ile Val Asp Met Leu Arg Lys His Thr Tyr Ala Asp Glu Phe
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Glu Gln Ser Arg Arg Lys Phe Val Asn Gly Asp Gly Lys Arg Ser Gly
165 170 175

Leu Glu Thr Ala Thr Tyr Gly Asn Asp Ala Val Leu Arg Ala Arg Glu
180 185 190

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Val Leu Phe Glu Lys Thr Val Thr Pro Ser Asp Val Gly Lys Leu Asn
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Arg Leu Val Ile Pro Lys Gln His Ala Glu Lys His Phe Pro Leu Pro
210 215 220

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225 230 235 240

Leu Ile Asn Leu Glu Asp Arg Thr Gly Lys Val Trp Arg Phe Arg Tyr
245 250 255

Ser Tyr Trp Asn Ser Ser Gln Ser Tyr Val Leu Thr Lys Gly Trp Ser
260 265 270

Arg Phe Val Lys Glu Lys Asn Leu Arg Ala Gly Asp Val Val Cys Phe
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Glu Arg Ser Thr Gly Pro Asp Arg Gln Leu Tyr Ile His Trp Lys Val
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Phe Asn Val Ser Asn Glu Lys Pro Asn Asp Val Ala Val Glu Cys Val
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cga caa gac ccg aca atg caa ggc cag aag caa atg atc tcc ttt agt Arg Gln Asp Pro Thr Met Gln Gly Gln Lys Gln Met Ile Ser Phe Ser 85 90 95	356
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gcc atg gcc tac gac cgc caa gcc ttc aaa tta cga ggc cac agc gca Ala Met Ala Tyr Asp Arg Gln Ala Phe Lys Leu Arg Gly His Ser Ala 180 185 190	644
aca ctg aat ttc ccg gag cat ttt gtg aat aag gaa agc gag ctg cat Thr Leu Asn Phe Pro Glu His Phe Val Asn Lys Glu Ser Glu Leu His 195 200 205 210	692
gat tca aac tcg tcg gat cag aaa gaa cct gaa acg cca cag cca agc Asp Ser Asn Ser Ser Asp Gln Lys Glu Pro Glu Thr Pro Gln Pro Ser 215 220 225	740
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Ser Ser Ser Pro Tyr Ser Leu Glu Ala Phe Pro Phe Ser Leu Asp Pro
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Thr Leu Gln Asn Gln Gln Gln Leu Gly Ser Tyr Val Pro Val Leu
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Glu Gln Arg Gln Asp Pro Thr Met Gln Gly Gln Lys Gln Met Ile Ser
 85 90 95

Phe Ser Pro Gln Gln Gln Gln Gln Gln Gln Tyr Met Ala Gln Tyr
100 105 110

Trp Ser Asp Thr Leu Asn Leu Ser Pro Arg Gly Arg Met Met Met Met
115 120 125

Met Ser Gln Glu Ala Val Gln Pro Tyr Ile Ala Thr Lys Leu Tyr Arg
130 135 140

Gly Val Arg Gln Arg Gln Trp Gly Lys Trp Val Ala Glu Ile Arg Lys
145 150 155 160

Pro Arg Ser Arg Ala Arg Leu Trp Leu Gly Thr Phe Asp Thr Ala Glu
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Glu Ala Ala Met Ala Tyr Asp Arg Gln Ala Phe Lys Leu Arg Gly His
180 185 190

Ser Ala Thr Leu Asn Phe Pro Glu His Phe Val Asn Lys Glu Ser Glu
195 200 205

Leu His Asp Ser Asn Ser Ser Asp Gln Lys Glu Pro Glu Thr Pro Gln
210 215 220

Pro Ser Glu Val Asn Leu Glu Ser Lys Glu Leu Pro Val Ile Asp Val
225 230 235 240

Gly Arg Glu Glu Gly Met Ala Glu Ala Trp Tyr Asn Ala Ile Thr Ser
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Lys His Pro Asn Phe	Arg Gly	Val Arg Met	Arg Gln Trp	Gly Lys Trp		
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Val Ser Glu Ile Arg	Glu Pro Lys	Lys Lys Ser	Arg Ile Trp	Leu Gly		
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Thr Phe Ser Thr Ala	Glu Met Ala	Ala Arg Ala His	Asp Val Ala	Ala		
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tta gcc atc aaa	ggc ggt	tct gca cat	ctc aac ttc	ccg gag ctc	gct	400
Leu Ala Ile Lys Gly	Ser Ala His	Leu Asn Phe	Pro Glu Leu	Ala		
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tat cac ctc aga	cca gct	agt gcc gac	cct aaa gac	atc caa	gct	448
Tyr His Leu Pro Arg	Pro Ala Ser	Ala Asp Pro	Lys Asp Ile	Gln Ala		
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gcc gcc gca gct	gca gct	gtg gcc att	gac atg gat	gta gag		496
Ala Ala Ala Ala	Ala Ala Val	Ala Ile Asp Met	Asp Val Glu			
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Thr Ser Pro Ser Pro	Ser Pro Thr	Val Thr Glu Thr	Ser Ser Pro			
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gct atg ata gca	ctc tcc	gac gac gct	tcc gat ctt	cct gat	ctc	592
Ala Met Ile Ala Leu	Ser Asp Asp	Ala Phe Ser Asp	Leu Pro Asp Leu			
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Lys Lys Ser Arg Ile Trp Leu Gly Thr Phe Ser Thr Ala Glu Met Ala		
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His Leu Asn Phe Pro Glu Leu Ala Tyr His Leu Pro Arg Pro Ala Ser		
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Thr Val Thr Glu Thr Ser Ser Pro Ala Met Ile Ala Leu Ser Asp Asp		
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Val Ser Glu Ile Arg Leu Pro His Ser Arg Glu Arg Ile Trp Leu Gly			
35 40 45			
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Pro Ser Ile Ser Val Glu Lys Ser Leu Thr Pro Pro Glu Ile Gln Glu			
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Ala Ala Ala Arg Phe Ala Asn Thr Phe Gln Asp Ile Val Lys Gly Glu			
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Ser Tyr Asp Thr Pro Glu Lys Ala Ala Arg Ala Phe Asp Ala Ala Gln 50 55 60	
Phe Cys Leu Arg Gly Gly Asp Ala Asn Phe Asn Phe Pro Asn Asn Pro 65 70 75 80	
Pro Ser Ile Ser Val Glu Lys Ser Leu Thr Pro Pro Glu Ile Gln Glu 85 90 95	
Ala Ala Ala Arg Phe Ala Asn Thr Phe Gln Asp Ile Val Lys Gly Glu 100 105 110	

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Phe Leu Asp Leu Leu Pro Met Asn Phe Gly Phe Asp Ser Phe Ser Asp
145 150 155 160

Asp Phe Ser Gly Phe Ser Gly Gly Asp Arg Phe Thr Glu Ile Leu Pro
165 170 175

Ile Glu Asp Tyr Gly Gly Glu Ser Leu Leu Asp Glu Ser Leu Ile Leu
180 185 190

Trp Asp Phe
195